

## IN THE CLAIMS

Please cancel claim 17.

Please amend claims 1, 10, 12, 34, 40, 50, 53 and 63 as follows:

1. (Once amended) A multiprocessor computer having hardware domains variabl[e]y configurable by commands from an operator, said computer comprising:

plurality of separate system units for performing sequences of transactions, each said system unit being individually physically removable and replaceable within said computer, and each including at least one of:

a processor unit for generating addresses within a predetermined global range[.];

a memory unit for storing data at a set of addresses within said predetermined global range, and

an input/output adapter for generating and/or receiving a set of addresses within said predetermined global range[:];

a global address router coupled to said system units for transferring addresses generated in any of said system units to others of said system units;

a global data router for transferring data from any of said system units to others of said system units[:];

a control-signal distributor for communicating a plurality of control signals from any of said system units to others of said system units for affecting the operation of all of said system units in response to conditions occurring in said any system unit[:];

a domain configurator for electronically dividing said computer into a plurality of software-configurable hardware domains each comprising an arbitrary subset of said system units independently of any physical reconnection of said system units within said computer[:];

a computer controller responsive to said commands for specifying to said domain configurator which of said system units belong to each of said hardware domains[:];

a domain filter coupled to all of said system units for electronically inhibiting at

least some of said control signals originating in those of said system units within one of said domains from affecting certain of said system units outside said one domain, wherein said domain filter is coupled to at least one of said global routers for inhibiting transactions on said one global router originating in those of said system units within one of said domains from being received in certain of said system units outside said one domain.

10. (Once amended) A multiprocessor computer having hardware domains variably configurable by commands from an operator, said computer comprising:

a plurality of separate system units for performing sequences of transactions, each said system unit being individually physically removable and replaceable within said computer, and each including at least one of:

a processor unit for generating addresses within a predetermined global range[[]],

a memory unit for storing data at a set of addresses within said predetermined global range[[]], and

an input/output adapter for generating and/or receiving a set of addresses within said predetermined global range[[]];

a global address router coupled to said system units for transferring addresses generated in any of said system units to others of said system units[[]];

a global data router for transferring data from any of said system units to others of said system units[[]];

a control-signal distributor for communicating a plurality of control signals from any of said system units to others of said system units for affecting the operation of all of said system units in response to conditions occurring in said any system unit[[]];

a domain configurator for electronically dividing said computer into a plurality of software-configurable hardware domains each comprising an arbitrary subset of said system units independently of any physical reconnection of said system units within said computer, said domain configurator further combining a plurality of said hardware domains into a domain cluster comprising an arbitrary subset of said domains independently of any physical reconnection of said system units within said computer;

a computer controller responsive to said commands for specifying to said domain

configurator which of said system units belong to each of said hardware domains, said computer controller being responsive to further ones of said commands for specifying to said domain configurator which of said system units belong to said domain cluster;

a domain filter coupled to all of said system units for electronically inhibiting at least some of said control signals originating in those of said system units within one of said domains from affecting certain of said system units outside said one domain, said domain filter permitting said at least some control signals originating in those of said system units within said one domain to affect those of said systems units outside said one domain but within said domain cluster.

12. (Once amended) A method of partitioning a computer having a plurality of system units, a global address router, a global data router, a control-signal distributor, and a domain filter into a plurality of independent hardware domains under programmable control, comprising:

(a) starting a configuration modes;

(b) receiving specification data defining a subset of said system units for inclusion within one of said hardware domains[[:]];:

(c) loading said specification data into a domain filter so as to render those of said system units within said one domain responsive to certain control signals in said distributor, and to render others of said system units unresponsive to said distributor[[:]];:

(d) repeating steps (b) and (c) for further specification data defining a different subset of said system units[[:]];:

wherein step (c) is also responsive to said specification data for loading said domain filter so as to render those of said system units within said one domain responsive to addresses on said global address router originating from those of said system units within said one domain, and to render said system units within said first domain unresponsive to addresses on said global address router originating from at least some of those of said system units not within said first domain.

34. (Once amended) A multiprocessor computer having hardware domains variably configurable by commands from an operator, said computer comprising:

a plurality of separate system units for performing sequences of transactions, each said system unit being individually physically removable and replaceable within said computer, and

each including at least one of:

a processor unit for generating addresses within a predetermined global range,  
a memory unit for storing data at a set of addresses within said predetermined  
global range, and

an input/output adapter for generating and/or receiving a set of addresses within  
said predetermined global range;

a global address router coupled to said system units for transferring addresses generated  
in any of said system units to others of said system units;

a global data router for transferring data from any of said system units to others of said  
system units;

a control-signal distributor for communicating a plurality of control signals from any of  
said system units to all others of said system units for affecting the entire operation of all of said  
system units in response to error and status conditions occurring in said any system unit;

a domain configurator for electronically dividing said computer into a plurality of  
software-configurable hardware domains each comprising an arbitrary subset of said system  
units independently of any physical reconnection of said system units within said computer;

a computer controller responsive to said commands for specifying to said domain  
configurator which of said system units belong to each of said hardware domains;

a domain filter coupled to all of said system units for electronically inhibiting at least  
some of said control signals originating in those of said system units within one of said domains  
from affecting certain of said system units outside said one domain.

40. (Once amended) A multiprocessor computer having hardware domains variable  
configurable by commands from an operator, said computer comprising:

plurality of separate system units for performing sequences of transactions, each  
including at least one of:

a processor unit for generating addresses within a predetermined global range,  
a memory unit for storing data at a set of addresses within said predetermined  
global range, and

an input/output adapter for generating and/or receiving a set of addresses within  
said predetermined global range;

a global address router coupled to said system units for transferring addresses generated in any of said system units to others of said system units;

a global data router for transferring data from any of said system units to others of said system units;

a control-signal distributor for communicating a plurality of control signals from any of said system units to others of said system units for affecting the operation of all of said system units in response to conditions occurring in said any system unit;

a domain configurator for electronically dividing said computer into a plurality of software-configurable hardware domains each comprising an arbitrary subset of said system units independently of any physical reconnection of said system units within said computer; and

a domain filter coupled to all of said system units for electronically inhibiting at least some of said control signals originating in those of said system units within one of said domains from affecting certain of said system units outside said one domain, wherein said domain filter is coupled to at least one of said global routers for inhibiting transactions on said one global router originating in those of said system units within one of said domains from being received in certain of said system units outside said one domain.

50. (Once amended) A multiprocessor computer having hardware domains variably configurable by commands from an operator, said computer comprising:

a plurality of separate system units for performing sequences of transactions, each including at least one of:

a processor unit for generating addresses within a predetermined global range,

a memory unit for storing data at a set of addresses within said predetermined global range, and

an input/output adapter for generating and/or receiving a set of addresses within said predetermined global range;

a global address router coupled to said system units for transferring addresses generated in any of said system units to others of said system units;

a global data router for transferring data from any of said system units to others of said system units;

a control-signal distributor for communicating a plurality of control signals from any of

said system units to others of said system units for affecting the operation of all of said system units in response to conditions occurring in said any system unit;

a domain configurator for electronically dividing said computer into a plurality of software-configurable hardware domains each comprising an arbitrary subset of said system units independently of any physical reconnection of said system units within said computer, said domain configurator further combining a plurality of said hardware domains into a domain cluster comprising an arbitrary subset of said domains independently of any physical reconnection of said system units within said computer;

a domain filter coupled to all of said system units for electronically inhibiting at least some of said control signals originating in those of said system units within one of said domains from affecting certain of said system units outside said one domain, said domain filter permitting said at least some control signals originating in those of said system units within said one domain to affect those of said systems units outside said one domain but within said domain cluster.

53. (Once amended) A multiprocessor computer having hardware domains variably configurable by commands from an operator, said computer comprising:

a plurality of separate system units for performing sequences of transactions, each including at least one of:

a processor unit for generating addresses within a predetermined global range,

a memory unit for storing data at a set of addresses within said predetermined global range, and

an input/output adapter for generating and/or receiving a set of addresses within said predetermined global range;

a global address router coupled to said system units for transferring addresses generated in any of said system units to others of said system units;

a global data router for transferring data from any of said system units to others of said system units;

a control-signal distributor for communicating a plurality of control signals from any of said system units to all others of said system units for affecting the entire operation of all of said system units in response to error and status conditions occurring in said any system unit;

a domain configurator for electronically dividing said computer into a plurality of

software-configurable hardware domains each comprising an arbitrary subset of said system units independently of any physical reconnection of said system units within said computer;

a domain filter coupled to all of said system units for electronically inhibiting at least some of said control signals originating in those of said system units within one of said domains from affecting certain of said system units outside said one domain.

63. (Once Amended) A method of partitioning a computer system having a plurality of system units into one or more independent hardware domains, said method comprising:

receiving specification data defining a first subset of said plurality of system units for inclusion within a first hardware domain;

loading said specification data into a domain filter and causing each system unit belonging to said first subset of said plurality of system units to be responsive to a first set of control signals in a control-signal distributor, and to cause system units not belonging to said first subset of said plurality of system units to be unresponsive to said first set of control signals; and

in response to said loading said specification data into said domain filter causing each system unit belonging to said first subset of said plurality of system units to be responsive to addresses originating from said system units belonging to said first subset of said plurality of system units, and causing each system unit belonging to said first subset of said plurality of system units to be unresponsive to addresses originating from said system units not belonging to said first subset of said plurality of system units.